SANYOU RELAYS
Relays for advanced technology

Miniature Automotive Relay SARW –Series

Features

- Small size with high switching current 15A, especially suitable for automotive control box.
- Both single and dual relays available.
- Low price with excellent performance.
- Both sealed and open types available.

Contact Capacity

Model	SARW–D/DM	SARW–DU/DW
Nominal switching capacity (res. load)	10A 14VDC	15A 14VDC
Max. switching current	10A	15A
Max. switching voltage	30VDC	30VDC
Max. switching power	140W	210W

Charateristic Data

Contact material	Silver alloy	
Initial contact resistance (at 6VDC 1A)	50mΩ Max.	
Operate time (at nominal volt.)	10msec. Max.	
Release time (at nominal volt.)	5msec. Max.	
Initial insulation resistance	100MΩ Min.(DC500V)	
Initial dielectric strength	Between open contacts: AC500V, 50/60Hz 1Min.	
	Between coil and contact: AC1,000V, 50/60Hz 1Min.	
Vibration resistance	Functional	10 ~ 55Hz at double amplitude of 1.5 mm
	Destructive	10 ~ 55Hz at double amplitude of 1.5 mm
Shock resistance	Functional	10G Min.
	Destructive	100G Min.
Endurance (operations)	Mechanical (at 10,800 ops./h)	10,000,000
	Electrical (at 900 ops./h)	100,000
Ambient temperature	–40℃ ~ +125℃ (no condensation)	
Unit weight	Open type: 8.0 g ; Sealed type: 10.0 g (single) ; 20.0 g (dual)	

Coil Data (at 20℃)

Nominal voltage (VDC)	Nominal operating current ±10% (mA)	Coil resistance ±10% (Ω)	Max. allowable voltage	Pick-up voltage (Max.)	Drop-out voltage (Min.)	Nominal operating power
5	220.00	23	150 % of nominal voltage	75 % of nominal voltage	5 % of nominal voltage	Approx. 1.10W
6	181.82	33				
9	121.62	74				
12	92.31	130				
15	73.53	204				
18	61.22	294				
24	46.15	520				

Ordering Information

Nomenclature

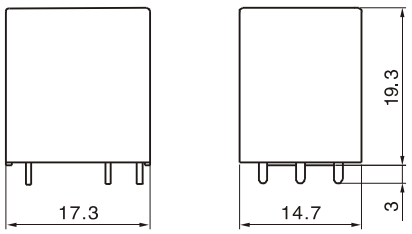
SARW–S – 1 12 D M –XX

Special Parameter	Nil–Standard type, Letter or number–Special requirement
Contact Form	Nil–1 Form C, M–1 Form A, W–2 Form C, U–2 Form A
Coil Power	D–1.10W
Coil Voltage (VDC)	05, 06, 09, 12, 15, 18, 24
Number of Poles	1–Single relay, 2–Dual relays
Protective Construction	Nil–Open type, S–Flux proofed, SH–Sealed type washable
Type Designation	SARW

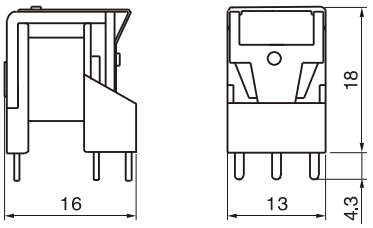
Outline Dimensions, Wiring Diagram, P.C. Board Layout (unit: mm)

SARW–1

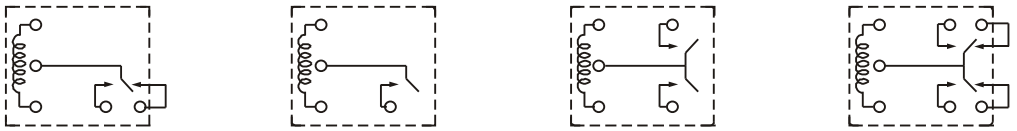
Sealed type



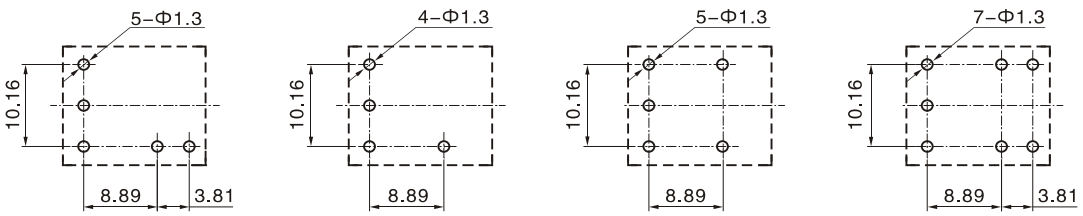
Open type



Unless otherwise specified:
If dimension < 1mm, tolerance: ±0.2mm;
If dimension 1~5mm, tolerance: ±0.3mm;
If dimension > 5mm, tolerance: ±0.4mm.
Note: 1. Extended terminal dimension is dimension before soldering.
2. Tolerance of P.C.B. layout: ±0.1mm.



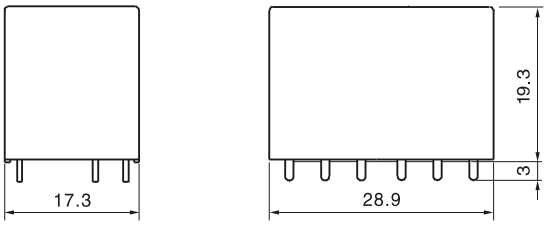
Wiring Diagram (bottom view)

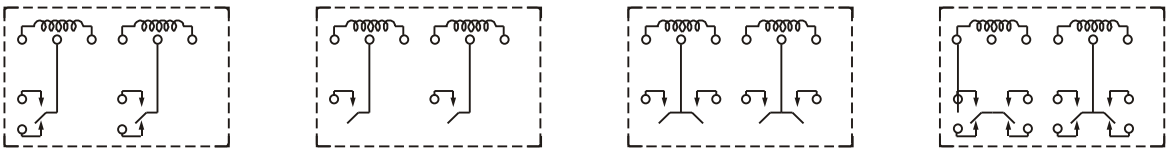


1c 1a 1u 1w

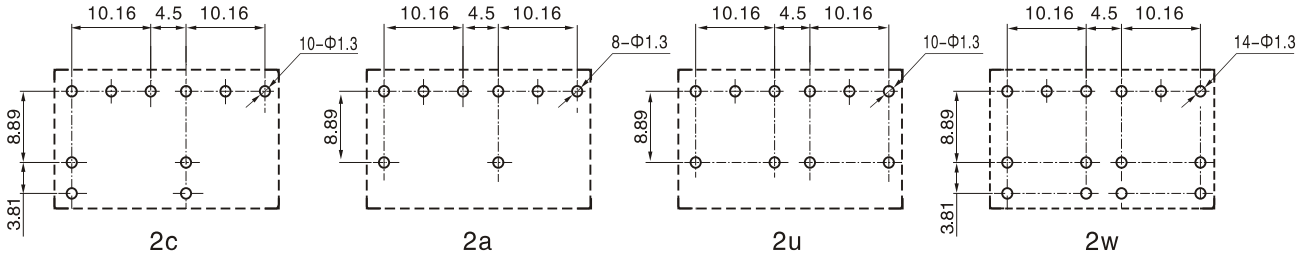
P.C.B. Layout (bottom view)

SARW-2





Wiring Diagram (bottom view)



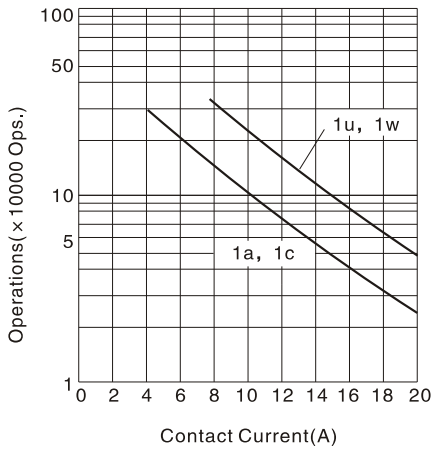
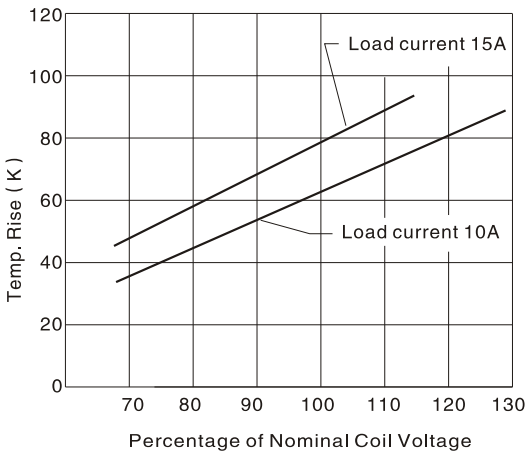
P.C.B. Layout (bottom view)

Typical Applications

- Car control switching box (warning system, automatic door lock system, etc), home appliances, instrument, etc.

Characteristic Curves

Endurance Curve



Coil Temp. Rise